(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 8 July 2004 (08.07.2004)

PCT

(10) International Publication Number WO 2004/056978 A1

(51) International Patent Classification⁷: C12Q 1/68

C12N 5/06,

(21) International Application Number:

PCT/EP2003/014234

(22) International Filing Date:

15 December 2003 (15.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

102 59 703.0-41 19 Dece

19 December 2002 (19.12.2002) DI

- (71) Applicant (for all designated States except US): IVONEX GMBH [DE/DE]; Arnold-Heller-Strasse 7, 24105 Kiel (DE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): LEHNERT, Lasse [DE/DE]; Waitzstrasse 71, 24105 Kiel (DE).
- (74) Agent: KRÖNCKE, Rolf; Gramm, Lins & Partner GbR, Freundallee 13, 30173 Hannover (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE (utility model), DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,

SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR THE SEPARATION OF CELL FRACTIONS

(57) Abstract: The present invention relates to a method for the separation of cells, in particular for the preparation of samples in tumor diagnostics. In particular, the present invention relates to a method for sample preparation for the detection of tumor cells of solid tumors in the course of the diagnosis for prognosis and stratification of therapy, comprising the destruction of cells that make this diagnosis more difficult or entirely impossible. Furthermore, the present invention relates to a kit for the preparation of samples and for the detection of the presence of the altered cells. Finally, the present invention relates to the use of the method and the kit in the diagnostics of altered cells such as tumor cells, and the performance of a PCR reaction to detect the tumor cells in body fluids and tissues.

